

doctor will pop it into a special micrApproved For Release 2004/10/281: CIA-RDP88-01314R000300450010-3 thaw it out before implanting it into his patient's body.

Dr. Hendron B. Lehr, chief of plastic surgery at the University of Pennsylvania Hospital, had been working on rapid thawing and freezing of animal organs for the past 10 years to perfect his technique. He pioneered human skin banks and now claims to be the first to freeze and thaw an animal kidney successfully.

"Don't ask me when a human organ bank will be working because I can't predict that," he says. "All I will say right now is that it will definitely happen, but I

can't say when.

"In the human banks at present we have only skin,' Dr. Lehr points out. "Its use is confined to burn dressings only. In the animal bank we have frozen kidneys, intestines and stomachs, and we are starting to work on the pancreas and the heart.

"When we can perfect pancreatic transplants, we will be able to end dia-

betes," he declares.

"The major problem was to find a suitable method of thawing the frozen organ. Quick-freezing has not been a problem but uneven

OHOOR WITH LIVE HIVE SOverely damages organs.

frozen organ it may take a week or two before it recovers from the damage and starts to function," Dr. Lehr explains.

"A kidney patient can be kept alive with a kidney machine but when you transplant a heart you want it to start beating as soon as

it goes into the patient.
"It might be conceivable," he continues, "to put it into another donor human or animal - until it recovers, and then do a

direct transplant."

The fact that a patient will need two operations for a thawed-out organ to be prepared for, and accepted by, the human body does not seem to be a major holdback, in many doctors' opinions.

Dr. Norman Shumway of Stanford University, the only U.S. surgeon still doing heart transplants, believes planting an extra heart in the groin or elsewhere in the patient's body for a few days would help it recover before the actual transplant.

"A heart has already been successfully stored in a dog's neck for four days,"

he revealed.

Dr. Frederick D. Kettere, an electrical engineer on Dr. Lehr's team of experts, has

organ by thawing it out to a microwave oven.

ovens as they are sometimes, called, can heat an object toan intense temperature is seconds by bombarding it with microwave radiation

Its great advantage is that it heats from the inside, res from the outside as orders. ovens do, so a human eggs. thawed out in a uncrosses oven would be merely heater not roasted.

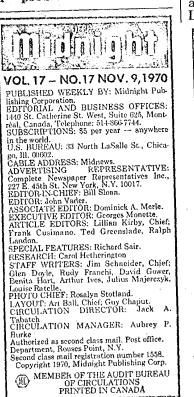
Electronic empioners and technicians on H's wreet and ple to construct a process. oven with a refer to the perature section

The Europe way a work be bested early or the min porulise of in a necessia in a but it mould be become on quickly that diswouldn't be damages to the thawing.

Dr. Horace Market . . . sistant chief of covery and gery at the U. of Person care a Hospital and another receive of Dr. Lehr's team, s 2 mg "We are not as close as the heart as Dr. Lehr is so the kidney."

He explains that the conis essentially a most * * * "since we know street muscle from the small town els and from the stores s survives freezing, there is every reason to believe that the heart will also survive

Dr. MacVaugh sans and





DR. HORACE MacVAUGH (shown in his lab) claims heart it and the cle and won't be difficult to freeze and the a Page 4 — MIDNIGHT

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